Women's Safety Jacket

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Abstract

In global scenario, the prime question in every girls mind is about her safety and the harassment issues. The only thought haunting every girl is when they will be able to move freely on the streets even in odd hours without worrying about their security. This project suggests a new technology to protect women. This project focuses on a security for women so that they will never feel helpless. The system consists of various modules such as GSM, GPS, memory card, shock circuit, buzzer, camera, Raspberry pi-3 module.

Today there is many cases which are happening about women. It was high time where we women needed a change. This project is based on women security where women feel protected. This paper describes about safety electronic system for women, built in public transport vehicles such as cars, buses and auto-rickshaws as nowadays women are being molested, kidnapped and harassed by the drivers. In each field there is a special impact of women like sports, dance, education, business, in politics also. Women are leading in each field. Are the girls in India are really safe? Always we get the answer No. Hence implemented electronic system is fitted in the jacket which has GPS, GSM, Camera, Shock circuit, Buzzer, memory card which are interfaced with Raspberry pi -3 boards to control all of the above.

Key Words: (Raspberry Pi Module, GPS, GSM, Buzzer, Shock Circuit, Camera, Memory Card)

1.INTRODUCTION

In global scenario, the prime question in every girls mind is about her safety and the harassment issues. The only thought haunting every girl is when they will be able to move freely on the streets even in odd hours without worrying about their security. This project suggests a new technology to protect women. This project focuses on a security for women so that they will never feel helpless. The system consists of various modules such as GSM, GPS, memory card, shock circuit, buzzer, camera, Raspberry pi- 3 modules. In this project we are using wireless technology for security purpose. An electronic jacket for women safety means that allow users to protect while traveling odd hours or when they feel helpless. This project is based on women's security as it is reported that every day there is many cases about women harassment. Although an Android based application on Women security is already

out in the market but for non-android users, I thought an idea for developing a project based on women security using Raspberry pi module.

Raspberry pi module receives the signals from GPS system which has present location information and then the Raspberry pi controller allows the GSM system to send the Alert Message to the three predefined numbers also in our jacket shock circuit is used to injure the attacker for self- defense. A camera used for the capturing image of an attacker and external memory card is used for the capturing image is save on this card.

1.1   Problem Statement

When the emergency situation occurs then women cannot protect and operate the smart phones. Also, she cannot be set alert function, when they are in risk situation & immediately they cannot pass and send their location to the police & family members.

1.2   Literature Survey

Electronic jacket for women safety: Women safety application using android mobile. In this paper system can show exact location to relatives, parents, friends and track every time interval.

[1]   Emergency panic button using microcontroller. In this paper panic button is used for protection while emergency situation occurs.

[2]   AVR microcontroller based wearable jacket for women safety .In this paper unified combination of wearable jacket and mobile technology for safety of women in the society. This system helps to alert family members and people closest to the victim by using buzzer, GPS, GSM module.

[3]   All in one intelligent safety system for women security in this paper the authors have reviewed of various existing systems on women security. The

GPS module tracks the longitude and latitude to trace an exact location of a user and sends the pre-stored emergency message including location to the registered contact numbers. The Audio Recording module starts the recording of the conversation

For five minutes and stored as evidences. The message goes in queue if network problem and send when network gets available.

[4]   Mobile based women safety application. In this paper some app created to know whether a woman is safe or not? Which indicates the present state of affairs of the woman by touching the option, which also indicates the location of the endangered woman they gave a phone call, video forwarding, fake calls, and location of the person, first-aid details, and application having the instructions that is the way to use the application.
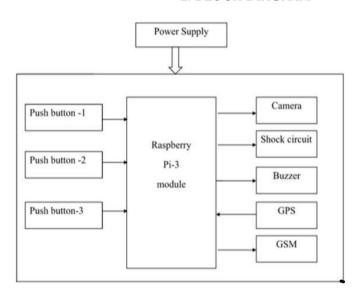
1. BLOCK DIAGRAM

Fig.1: System Block diagram

DESCRIPTION

In this project we are use Raspberry pi module is main part. This module has total 40 pins. In our project we are using three buttons. Out of that three buttons first button is used for circuit on/off. Second bottom is used for on GPS, GSM& buzzer. Third button is used for shock circuit.

Once first button is pressed that time circuit is on. When second button is pressed that time GSM is on & GPS is also on. It sends location to predefined numbers. We save three numbers that three numbers are police station, neighbor's, and parents. Location is send to those three numbers in the form of latitude and longitude also using GSM alert message "MY LIFE IS IN DANGER SITUATION". At that also buzzer will be on .When third button is pressed that time shock circuit will be on. When attacker attack to women that time shock circuit is used to injure attacker for self defence. At time camera will be on for capturing image and that capturing image is saved on memory card. Therefore it is helpful for police for searching attacker. Today's life this system is most useful.

Intel board has many advantages compared to Arduino board. The below table 1 shows the comparison between Arduino modules (Uno, Nano) and Galileo board.

Table -1: Comparison between Raspberry pi module and intel Galileo board.
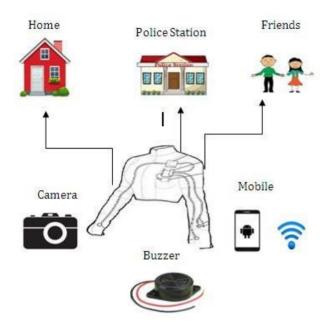
1.1 ARCHITECTURAL MODEL

Fig.2: Architectural model

This Is The Architectural Model Of Our Project. In That GPS, GSM Modules Are Used.

GSM: - A GSM Modem Is a Wireless Modem That Works with a GSM Wireless Network .It Operates At Either The 900mhz Or 1800mhz Frequency Band. It Supports Voice Calls and Data Transfer Speeds.

GPS: - Useable in Solder-Free Breadboard Projects ready Use with Both 3.3 V and 5 V Microcontrollers

CAMERA:- In This System We Are Attaching A Camera On Jacket Which Will Capture The Image Of Culprit. So That It Will Be Easy For Police To Search The Culprit.

BUZZER: - The Alarm is designed to assist in alerting somebody in case Of emergency Situations.

All this description can be design in flow of operation.

RESULT

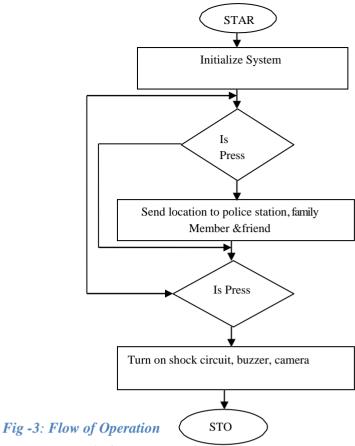|	Raspberry model	Intel Galileo
Flash	Micro SD socket	SDIO interface; 4GB onboard flash
RAM	512MB	1GB
Processor	700MHz ARM1176JZF-S	500MHz Dual-core Atom processor; 100MHz Quark MCU
Ethernet	10/100 onboard	None
Wi-Fi	None	Dual-band 802.11 (a/b/g/n)
USB	4 ports	1 USB-OTG
Power Consumption	5V * 600mA (~3W)	3.3V - 4.5V @ <1W
Dimensions	85mm x 56mm x 19.5mm	60mm x 29mm x 8mm*

Fig -3: Flow of Operation

Fig.4: Hardware with jacket

2. CONCLUSIONS

The proposed design will help the girl when she is danger zone. She can make rescue of herself in danger situations. And this circuit will use to remove or decrease the tension of girl when she walks alone in night hour also, so that she will never feel helpless at any situation and can protect her by herself. And the culprits face will be captured by camera so that police will be able to catch him easily.

3. FUTURE SCOPE

- Wearable devices such as activity trackers are a good. Example of the Internet of Things, since they are part of the network of physical objects or "things" embedded with electronics, software, sensors and connectivity to enable objects to exchange data with a manufacturer, operator and/or other connected devices, without requiring human intervention. This project is very useful in future for a women safety.

- Primary School Children Safety:-As the school children safety are major concerns for parents as well as school management due to the recent incidents of child crimes like children missing, abuse, kidnapping etc. This module monitors the child safety when they are travelling in school buses.
  Electronic Jacket for Women Safety in That We Use
  Wireless System to Send Message, Location .It Is Very Useful For Security Purpose. Shock Circuit Is Used To Injure Attacker For Self Defense. Therefore This System Is Used for Protection and to Control Other Activities Which Are Happen today's Life. Buzzer Is Used For Help. All These Tiny Circuit Connected To The Raspberry Pi Module. Also Image Of That Culprit Save On Memory Card. And It Is Proven In this Fig.4

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